

AF/2613

Ticket No.: K-197

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of  
Hyun Duk CHO et al.

Serial No. 09/630,708

Confirm. No.: 7522

Filed: August 1, 2000

: EXPEDITED PROCEDURE  
: UNDER 37 C.F.R. §1.116

: Group Art Unit: 2613

: Examiner: Y. Lee

: Customer No.: 34610

For: SYSTEM AND METHOD FOR CODING AND DECODING PICTURE SIGNALS BASED ON A  
PARTITION TABLE INCLUDING LENGTH INFORMATION

U.S. Patent and Trademark Office  
2011 South Clark Place  
Customer Window, Mail Stop AF  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202

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MAY 28 2004

Dear Sir:

Transmitted herewith is a Request for Reconsideration in the above identified application.

☒ No additional fee is required.

☐ Also attached:

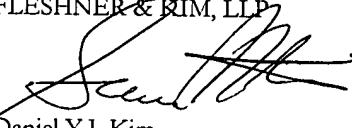
Technology Center 2600

The fee has been calculated as shown below:

	NO. OF CLAIMS	HIGHEST PREVIOUSLY PAID FOR	EXTRA CLAIMS	RATE	FEE
Total Claims	20	20	0	x \$18 =	0
Independent Claims	4	4	0	x \$86 =	0
If multiple claims newly presented, add \$290.00					
Fee for extension of time					
<b>TOTAL FEE DUE</b>					<b>0</b>

- ☐ Please charge my Deposit Account No. 16-0607 in the amount of \$. An additional copy of this transmittal sheet is submitted herewith.
- ☐ A check in the amount of \$ \_\_\_\_\_ (Check # \_\_\_\_\_) is attached.
- ☒ The Commissioner is hereby authorized to charge payment of any fees associated with this communication or credit any overpayment, to Deposit Account No. 16-0607, including any filing fees under 37 C.F.R. 1.16 for presentation of extra claims and any patent application processing fees under 37 C.F.R. 1.17.

Respectfully submitted,  
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Date: May 26, 2004

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Attorney Docket No: K-197



#10 N.E.  
6-2-04  
X

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of : **Expedited Procedures Requested**  
CHO, Hyun Duk et al. : Confirmation No. 7522  
Serial No. 09/630,708 : Examiner: Lee, Y.  
Filed: August 1, 2000 : Group Art Unit: 2613  
For: SYSTEM AND METHOD FOR CODING AND DECODING PICTURE SIGNALS  
BASED ON A PARTITION TABLE INCLUDING LENGTH INFORMATION

**REQUEST FOR RECONSIDERATION**  
**UNDER 37 CFR § 1.116**

**RECEIVED**

U.S. Patent and Trademark Office  
2011 South Clark Place  
Customer Window, Mail Stop AF  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, Virginia 22202

MAY 28 2004

Technology Center 2600

Sir:

The following amendments and remarks are submitted in response to the Final Office Action mailed on February 26, 2004 in connection with the above-identified application.

Claims 1-20 are pending.

Reconsideration of the application is respectfully requested for the following reasons.

**I. The Rejection under 35 USC § 102(b) is Improper.**

In the Final Office Action, the Examiner maintained the rejection of claims 1-6 and 13-20 for being anticipated by the Nagai patent. Applicant submits that this rejection is in clear error for at least the following reasons.

Claim 1 recites broadly embodiments of the invention disclosed in the specification. In particular, claim 1 defines a method having two steps for encoding a picture signal. The first step includes partitioning picture information of one block group into respective information regions. The second step includes "forming a partition table having length information indicating a length of each of the information regions." (See, e.g., Figure 3 of Applicants' drawings). The Nagai patent does not disclose this second step.

The Nagai patent discloses a system for encoding picture information. This system includes an encoder 21 and a code-string simplifier 28. The encoder codes an input image signal to form a basic code string, S11. The code-string simplifier then generates a simplified code string, S18, from the basic code string. The simplified code string is then combined with the basic code string in synthesizer 23 to form an encoded picture signal. (See Fig. 7). The encoded picture signal is shown in Fig. 8, where the unhatched portion corresponds to the basic code string and the hatched portion corresponds to a delayed version of the simplified code string, termed an additional code string.

The Examiner relied on the disclosure at columns 13-15 of Nagai to reject the claims. Here, Nagai discloses the internal structure of the code-string simplifier. This structure includes an important data selector 29 and a code-string transformer 30. (See Fig. 18). The important data selector selects only certain information (e.g., header, motion vector data, DCT coefficients) from the basic code string, and the code-string transformer transforms the selected data into a simplified code string such as shown in Fig. 8.

The code-string transformer transforms the data output from selector 29 into a simplified code string using a code table. However, this code table is very different from the partition table recited in claim 1. Specifically, the partition table of claim 1 includes length information including a length of the information regions included in the encoded picture signal. The Nagai code table does not include this information.

The Nagai code table is a variable-length code table which describes a relationship between coded object values and code words (e.g., variable length code words) in a memory. (See column 13, lines 10-15). Using the code table, transformer 30 converts the data output from selector 29 into a simplified code string which consists of variable-length codes. However, neither the object values nor the code words included in the code table include length information indicating a length of information regions (e.g., header, motion vector, and DCT coefficient regions) in a picture signal, as required by claim 1. Nor do these object values and code words provide an indication of the lengths of the basic and additional code strings, which the Examiner indicated correspond to the information regions of claim 1.

In the Final Office Action, the Examiner further indicated that the variable-length codes generated by the Nagai code table correspond to the partition table of the claimed invention. However, no such correlation can be properly drawn. As those skilled in the art appreciate, a variable-length code represents the substantive content of data. This form of code is contrasted from fixed-length codes in that different code lengths may be used to represent the data. It is therefore clear that the word "length" in variable-length code refers not to the length of an

information region in a picture signal but to the length of the code itself. The following portions of Applicant's specification are illustrative:

In general, if a signal to be transmitted or stored is represented with a series of different symbols, coding is a representation of each of the symbols with a length of code, wherein representation of each symbol with the same lengths of codes is called a fixed length coding, and representation of each symbol with different lengths of codes is called a VLC (Variable Length Coding).

In the VLC in which respective symbols are represented with different lengths of codes, codes with short lengths are assigned to the symbols with a high frequency of occurrence in view of probability, and codes with relatively long lengths are assigned to the symbols with a low frequency of occurrence in view of probability . . . (Emphasis added)(See Applicant's disclosure, page 1).

In view of the foregoing, and contrary to the position taken by the Examiner, one of ordinary skill in the art therefore would not understand the variable-length codes generated by the Nagai code table to refer to the lengths of the information regions included in the picture signal. And this is so, whether the Examiner construes the phrase "information regions" to correspond to the header, motion vector, and DCT coefficient portions of a picture signal or to basic and additional code strings, since the only length information conveyed by the Nagai codes is the lengths of the codes themselves, based on frequency of the probability of occurrence.

Moreover, Nagai does not disclose nor would one of ordinary skill in the art understand that the information used in the Nagai table to generate variable-length codes (object values and code words) constitutes length information indicating the lengths of information regions in an encoded picture signal as claimed.

Because the Nagai patent does not disclose forming a partition table as recited in claim 1, it is respectfully submitted that Nagai cannot anticipate claim 1. Applicant further submits that claim 1 and its dependent claims are non-obvious and thus patentable over Nagai.

Claim 13 recites receiving a picture signal including information regions of a block group and a partition table having length information on the information regions, analyzing the partition table to determine the length of each information region, and decoding the partition regions according to the length information. The Nagai patent does not disclose a partition table of this type. Based on these differences, it is respectfully submitted that claim 13 is patentably distinguishable from Nagai.

Claim 14 recites receiving a picture signal including information regions of a block group and a partition table region having length information on the information regions, said information regions being channel coded in redundancies different from one another, analyzing the partition table to determine the length information of the information regions, and channel decoding the information regions according to the length information. The Nagai patent does not disclose a partition table of this type. Based on these differences, it is respectfully submitted that claim 14 is patentably distinguishable from Nagai.

Claim 15 recites grouping picture information from a plurality of blocks into information regions, partitioning the regions, and "forming a partition table which includes length information for each of the regions." The Nagai patent does not disclose a partition table of this type. Based on these differences, it is respectfully submitted that claim 15 and its dependent claims are patentably distinguishable from Nagai.

**II. The Rejection under 35 USC § 103(a) is Improper.**

The Examiner rejected claims 7-12 for being obvious over Nagai. In issuing this rejection, the Examiner acknowledged that Nagai differs from the claimed invention in that it fails to disclose transmitting a partition table as specified in claims 7-12. The Examiner, however, then stated that one of ordinary skill in the art would understand that variable length codes from the code table are being transmitted. Applicant traverses this rejection on the following grounds.

While it is true that the Nagai code table is used to transform the data from selector 29 into variable-length codes, those codes do not constitute a "partition table having length information indicating lengths of the header region, the motion vector region, and discrete cosine transform coefficient region" as recited in claim 7. Rather, as previously discussed variable-length codes merely encode symbols representative of picture information. They do not provide an indication of the lengths of header, motion vector, and discrete cosine transform coefficient regions or any other portion of an encoded picture signal and thus cannot properly be said to correspond to the partition table of the claimed invention.

Serial No. 09/630,708

Docket No. : K-0197

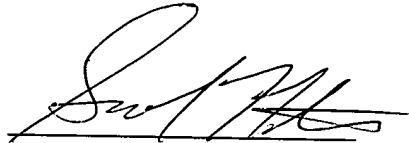
For at least these reasons, it is respectfully submitted that claims 7-12 are patentably distinguishable from the Nagai patent.

Reconsideration and withdrawal of all the rejections and objections made by the Examiner is hereby respectfully requested.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of the application is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with this application, including extension of time fees, to Deposit Account No. 16-0607 and credit any excess fees to the same Deposit Account.

Respectfully submitted,  
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